

Name _____ Period _____

Study Guide: Earthquakes

1. The study of earthquakes is called _____, and scientists who study earthquakes are called _____.
2. An _____ is the trembling or shaking of the earth's surface, and a _____ is a fracture in the earth's crust where there has already been some movement.
3. Waves of energy caused by the sudden breaking of rock within the earth are called _____, and the location below ground where the rupture of an earthquake begins and energy is released is called the _____.
4. An earthquake wave that travels on or near the surface of the earth is a _____ wave, and an earthquake wave that travels through the body of earth is a _____ wave.
5. Surface waves travel _____ than body waves.
6. Name 2 properties of waves.
7. P waves are also called _____ waves, and they vibrate _____ to the direction of the wave movement. They are a type of compressional earthquake wave.
8. S waves are also called _____ waves, and they vibrate _____ to the direction of the wave motion. They are a type of transverse earthquake wave.
9. The first waves to reach a seismograph station are _____ waves, and _____ waves cause more damage because they cause horizontal shaking.
10. A _____ is the paper on which earthquakes are recorded, and a _____ is an instrument that detects, records, and measures the vibrations produced by an earthquake. It only records vibrations that are _____ to the seismograph's arm. (See your Recording Vibrations Lab for help)
11. An earthquake wave that follows the main shock of an earthquake is called a/an _____, and the _____ is the point on the surface of the earth directly above the focus of an earthquake. (Earthquake waves are strongest here.)
12. _____ is a measure of the total amount of energy released at the source of an earthquake, and _____ is a measure of the damage done by an earthquake.
13. Intensity is measured using the _____ scale, and magnitude is measured using the _____ scale.

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14. List 5 factors that affect the intensity of an earthquake.

15. Explain the plate tectonic theory.

16. List the 3 main belts of earthquake activity.

17. The _____ is the rigid, cool, outer layer of the earth with the lowest density. The largest layer is the _____. The _____ core is solid nickel and iron.

18. _____ waves cannot travel through liquids. Therefore, they cannot travel through the _____ core because it is molten iron.

19. The lithosphere consists of what 2 layers?

20. The layer of the mantle that lies directly below the lithosphere is the _____. It is solid but flows, like taffy.

21. _____ plate boundaries occur where plates separate, _____ plate boundaries occur when edges of continental or oceanic plates collide, and _____ plate boundaries occur when plates slide past each other.

22. A _____ is a mountain-like landform that develops when plates separate and water enters where the plates split.

23. If 2 continental plates collide, _____ form.

24. If oceanic and continental plates collide, the _____ plate will slide under the _____ plate. If two oceanic plates collide, the older, _____ dense plate slides under the newer, _____ dense plate.

25. Destructive earthquakes are common near _____ plate boundaries. (No new land is formed though!)

26. Where is the San Andreas Fault located?